

# Work Order ID 84123

**\*84123\***

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May-03-12 11:27:17 AM

Item ID: D2012-113      Accept      **\*N900040100\***      Setup Start **\*NS1\***  
 Revision ID:      Stop **\*NS2\***  
 Item Name: Clamp  
 Start Date: 03/05/2012      Start Qty: 20.00      **\*20\***      Cust Item ID:  
 Required Date: 17/05/2012      Req'd Qty: 20.00      **\*20\***      Customer:  
 Reference:

Approvals:      Process Plan: MLJ      Date: 12/05/03      Tooling:      Date:      Run Start **\*NR1\***  
 QC:      Date:      SPC (Y/N):      Date:      Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description                | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|---|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| Draw Nbr                       | Revision Nbr                            |                      |         |        |              |               |               |                  |                |
| D2012-113                      | Rev C                                   |                      |         |        |              | (39)          |               |                  |                |
| 100                            |   | 0.00                 |         |        |              |               |               |                  |                |
| <b>*100*</b>                   | FLOW WATER JET                          |                      |         |        |              |               |               |                  |                |
| Waterjet                       | Memo                                    | 0.00                 |         |        |              |               |               |                  | B2-5-15        |
| FLOW CNC Waterjet              | 1-Cut as per Dwg D2012-113              |                      |         |        |              |               |               |                  |                |
| 304 - Q63                      | Dwg Rev: <u>E</u>                       |                      |         |        |              |               |               |                  |                |
|                                | Prog Rev: <u>E</u>                      |                      |         |        |              |               |               |                  |                |
|                                | 2-Deburr if necessary                   |                      |         |        |              |               |               |                  |                |
| 110                            |   | 0.00                 |         |        |              |               |               |                  |                |
| <b>*110*</b>                   | QC2- Inspect parts off machine FAI/FAIB |                      |         |        |              |               |               |                  |                |
| QC                             | Memo                                    | 0.00                 |         |        |              |               |               |                  | B2-5-15        |
| Quality Control                |   |                      |         |        |              |               |               |                  |                |
| 120                            |   | 0.00                 |         |        |              |               |               |                  |                |
| <b>*120*</b>                   | QC8- Inspect parts - second check       |                      |         |        |              |               |               |                  |                |
| QC                             | Memo                                    | 0.00                 |         |        |              |               |               |                  |                |
| Quality Control                |   |                      |         |        |              |               |               |                  |                |

counts  
(39)

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

# Work Order ID 84123

May-03-12 11:27:17 AM

**\*84123\***

Page 2

Item ID: D2012-113 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Clamp  
 Start Date: 03/05/2012 Start Qty: 20.00 **\*20\*** Cust Item ID:  
 Required Date: 17/05/2012 Req'd Qty: 20.00 **\*20\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description                        | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|---|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 130                            | Small Fab                                       | 0.00                 |         |        |              |               |               |                  |                |
| <b>*130*</b>                   | Small Fab                                       | 0.00                 |         |        |              | 39            | 0             |                  | FF<br>12-05-17 |
| Small Fab                      | Memo  |                      |         |        |              |               |               |                  |                |
|                                | 1- Deburr any rough edges                       |                      |         |        |              |               |               |                  |                |
|                                | 2- Bend as per Dwg D2012-113 using DT8458       |                      |         |        |              |               |               |                  |                |
|                                | 3- Tumble                                       |                      |         |        |              |               |               |                  |                |
| 140                            | QC5- Inspect part completeness to step on W/O   | 0.00                 |         |        |              |               |               |                  |                |
| <b>*140*</b>                   | QC  | 0.00                 |         |        |              | cuts<br>x39   |               |                  |                |
| Quality Control                | Memo  |                      |         |        |              |               |               |                  |                |
| 150                            | Identify as per dwg & Stock Location <b>SLB</b> | 0.00                 |         |        |              |               |               |                  |                |
| <b>*150*</b>                   | Packaging                                       | 0.00                 |         |        |              | 39x           |               |                  | SP<br>12-5-22  |
| Packaging                      | Memo  |                      |         |        |              |               |               |                  |                |

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

May-03-12 11:27:17 AM

**Item ID:** D2012-113

**Accept**

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

**Item Name:** Clamp

Stop \*NS2\*

**Start Date:** 03/05/2012      **Start Qty:** 20.00

**\*20\***

**Cust Item ID:**

**Required Date:** 17/05/2012      **Req'd Qty:** 20.00

\*20\*

**Customer:**

**Reference:**

**Approvals:**      **Process Plan:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Tooling:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Run Start \*NR1\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop \*NR2\*

Sequence ID/  
Work Center ID

### Operation Description

### Set Up/ Run Hours

| Tool ID | Tool # | Plan Code |
|---------|--------|-----------|
|---------|--------|-----------|

**Accept  
Qty**

Reject  
QtyReject  
Number

**Insp.  
Stamp**

160

QC21- Final Inspection - Work Order Release

0.00

**\*160\***

QC

## Memo

0.00

## Quality Control

12/5/22

mf  
12-05-22

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

# Picklist Print

May-03-12 11:27:20 AM

Page 1

Work Order ID: 84123

**\*84123\***

Parent Item: D2012-113

**\*D2012-113\***

Parent Item Name: Clamp

Start Date: 03/05/2012

Required Date: 17/05/2012

Start Qty: 20.00

Required Qty: 20.00

Comments: IPP: F01.10.05Fixed Typo and Added Inspection Level 21SM  
IPP Rev:G Now on Waterjet 07-03-28 JLM

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
| M304S16GA                       |                        | Purchased     |             | No                  |                  | 110             | sf                 | 254.3720       | 0.015       | 0.315789     | 39            | 11             |        |
| <b>*M304S16GA*</b>              |                        |               |             |                     |                  |                 |                    |                | **          |              |               |                |        |
| 304/316 Sheet .063              |                        |               |             |                     |                  |                 |                    |                |             |              |               |                |        |

1812-5-12

Location

Loc Qty

Loc Code

MAT020

254.372

120866

14.246

120877

48.126

121626

192

121626

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

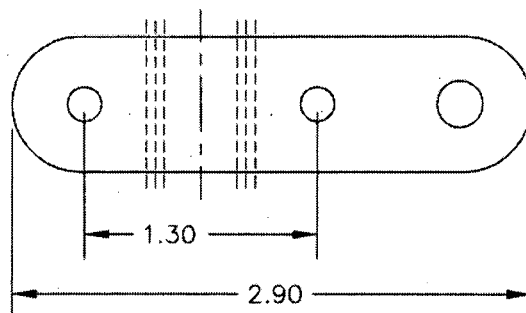
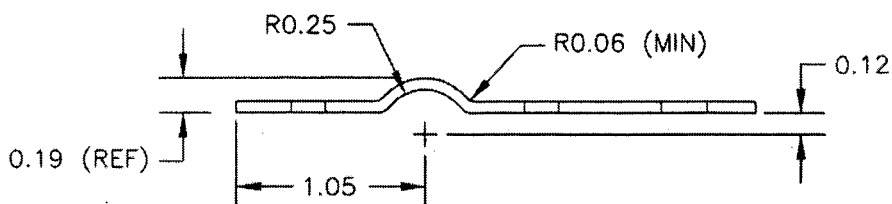




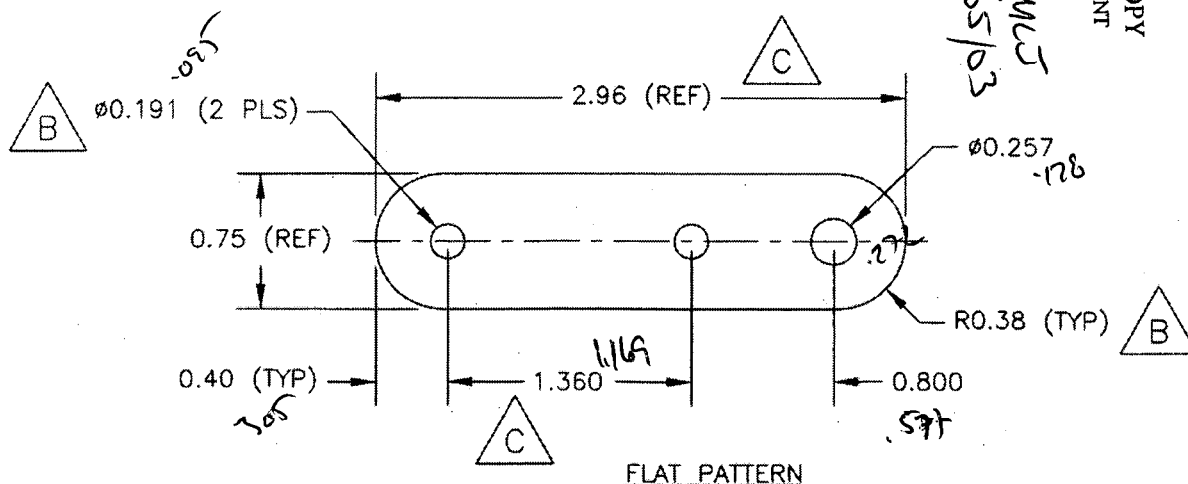


|                               |                                |   |                        |
|-------------------------------|--------------------------------|---|------------------------|
| DESIGN<br>JB                  | DRAWN BY<br>RF                 | DART AEROSPACE LTD<br>HAWKESBURY, ONTARIO, CANADA                           |                        |
| CHECKED<br><i>[Signature]</i> | APPROVED<br><i>[Signature]</i> | DRAWING NO.<br>D2012-113  | REV. C<br>SHEET 1 OF 1 |
| DATE<br>00.04.28              |                                | TITLE<br>CLAMP  | SCALE<br>1:1           |
| A                             | 92.06.03                       | REDRAWN FROM D2012  |                        |
| B                             | 00.02.23                       | REDRAWN; R0.38 WAS R0.50; $\phi$ 0.191 WAS $\phi$ 0.189; ADDED FLAT PATTERN |                        |
| C                             | 00.04.28                       | 2.96 WAS 3.35; 1.360 WAS 1.745  |                        |

RELEASED  
00.05.02



BENT DETAIL



MATERIAL: AISI 304/316 SS, 0.063 THICK  
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED  
ALL DIMENSIONS ARE IN INCHES

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